THE MAC Flyer

JUNE 1954—JUNE 1984

The 30th Anniversary Issue

The C-23A Sherpa...page 12

THE MAC Flyer

For Greater Safety in MAC Air Operations

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page 12

page 24

Features

4 Through the Years
TMF highlights since 1954.

8 The Mark of the Professional
Times change, but the qualities of a pro don't!

9 Supervision
A timely message from the past.

12 The C-23A Sherpa
An in-depth look at MAC's newest airlifter.

17 Roots: Where Airlift Began
Military air transport is older than you think.

20 As An Aircraft Commander
Five rules for pilots to live by.

21 Players in a Game
There were no winners in this contest.

24 C.R. Terror
Captain C.R. Terror makes his magazine debut.

30 Hands
They're not pretty, but they prevented an accident.

Departments

3 Flyer Call

16 Flying Hour Milestones

28 Quick Stoppers

31 After Deadlines

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Flyer Call

by Maj. James M. Lee
Supervising Editor

It's not often we get to participate in a momentous occasion, but the publication of this issue of *The MAC Flyer* is exactly that. Thirty years ago, the Military Air Transport Service recognized the undeniable fact that safety education is a vital part of mishap prevention. Armed with a charter from MATS Commander Lt. Gen. Joseph Smith to "Go to it!", the first issue of *The MATS Flyer* began spreading the safety word throughout MATS in June of 1954.

Now, 30 years later, we are still busily engaged in getting the safety word out to the men and women in the command. Although the aircraft and locations have changed and the term "MATS" is long-gone, the mission of this publication is *still* safety education, and that should never change.

This issue of *TMF* is different from all others in that it looks back on 30 years of *TMF* and MATS/MAC history. To accomplish this, we've reprinted selected articles from the previous 30 years. We chose articles to highlight some of our most significant accomplishments and to emphasize our roots as a command. One caution, though. We reprinted the articles exactly as they first appeared. As you'll clearly see, many practices and attitudes have changed in the past 30 years, as we've grown and matured. And that's as it should be.

But as the current *TMF* staff labors to prepare this special 30th anniversary edition, one fact becomes increasingly clear. This magazine has survived for 30 years only through the skill and dedication of the various *TMF* staffs and through the enthusiastic support from people at all levels of the command.

I know I can speak for each of the previous editors and art directors when I say we're proud to have played a part in making *The MAC Flyer* one of the very best safety publications around. To all who have served this safety magazine so well—thank you! For those of you who will take over from us and maintain the tradition of excellence—best of luck and keep them flying safe!

Through the Years

The MATS Flyer is Born.

The first issue of *The MATS Flyer* was published in June 1954. One article featured two new aircraft, the C-118 and the C-131A. Another introduced a young aviator destined to become a MATS/MAC legend, *Captain* C.R. Terror.

The C-133 "Weenie Wagon."

"The C-133s, kings of the cargo carriers, are on the way," promised the May 1958 magazine. The article gave tips on what to expect when "Flying the Heavies."

The *"Connie"*

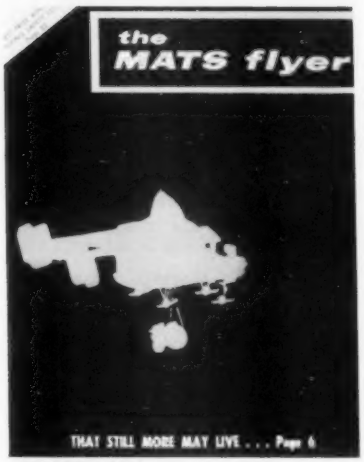
The tri-tailed C-121G was featured on the cover of the May 1959 issue. It was the lead-in to a hard-hitting article on ground handling mishaps.

"Transport Pilots' Code"

The code, published in the September 1960 issue, highlights the obligations and responsibilities of a transport pilot. Its message is as valid today as it was some 23 years ago.

"The Choppers Return"

The July 1961 issue announced that Air Rescue Service would soon receive 142 helicopters previously assigned to the Continental Air Command. Another article highlighted the capabilites of the H-43 "Huskie."



The Starlifter

The January 1962 issue told of the development of the C-141A. The magazine updated this important airlift advancement in subsequent issues.

A New Helicopter

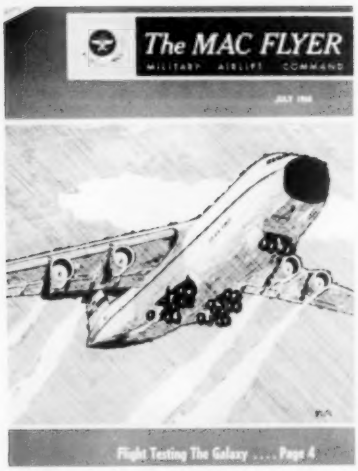
The advent of the world's most advanced rescue/cargo helicopter, the CH-3C, was around the corner and the magazine gave its readers a detailed look at it in the April 1963 issue.

The HC-130H

The Air Rescue Service HC-130H, featuring the Fulton recovery system, made its debut in the April 1965 issue of *The MATS Flyer*.

Anchors Away

After 19 years as a part of MAC, all units of the U.S. Navy assigned to MAC were withdrawn in 1967. The June 1967 magazine told the story of the end to a partnership forged in the Berlin Airlift.



Flight Testing the C-5

The July 1968 issue told how flight test crewmembers and engineers were preparing for the C-5 flight test program.

MAC's Weekend Warriors

"They come from all walks of life and are distinguished only by their dedication and professionalism." The June 1970 issue featured the Air National Guard and the Air Force Reserve and their valuable contributions to MAC.

The Homecoming

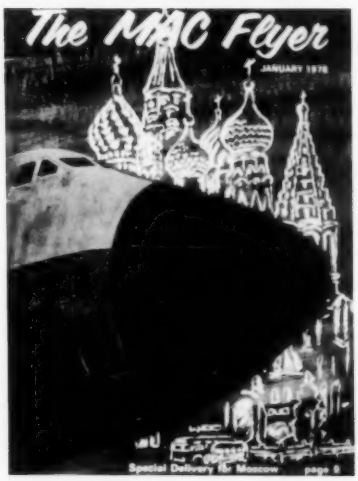
A MAC AC reflects on his role in Operation Homecoming, the return of U.S. prisoners of war from North Vietnam. Published in the October 1974 issue, the article describes the 1973 missions which won MAC crewmembers the Mackay Trophy.

MAC's New Look

The February 1975 issue of *TMF* welcomed the tactical airlifters into MAC. Bringing with them their C-130s, C-7s and C-123s, the active duty, Air National Guard and Air Force Reserve units made MAC the world's largest airlift agency.

Stretched Starlifter

MAC's workhorse C-141 got a new look with the completion of the YC-141B. An article in the April 1977 magazine explained the development of the first air-refuelable Starlifter.

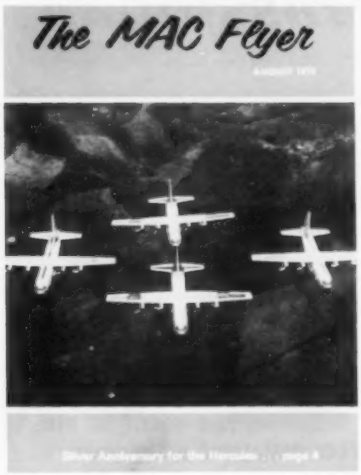


Special Delivery for Moscow

In June 1977 a C-5A airlifted a 40-ton superconducting magnet from Chicago to Moscow. A two-part article appearing in the January and February 1978 magazines told the inside story of the C-5's world-record airlift.

Herk Turns 25

In August 1979 the venerable C-130 celebrated its 25th anniversay. *TMF* highlighted the Herk's accomplishments since its first flight in 1954.



KC-10 "Extender"

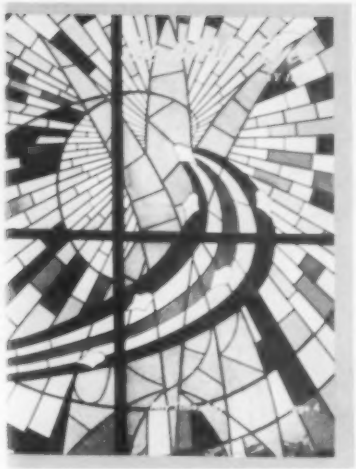
"A new tanker/cargo aircraft will help strengthen the backbone of deterrence." An article in the February 1981 issue of *TMF* explained the dual capabilities of the "Extender."

The AWTH Program

In the May 1982 issue, *TMF* introduced the AWTH (Accident Waiting To Happen) program. Designed to identify and correct human factor causes for mishaps *before* they cause a mishap, this innovative program became a vital part of mishap prevention efforts in the command.

"Any Time, Any Place"

A major addition to MAC took place on 1 March 1983, when Air Force special operations forces became part of the command. An article in the May 1983 issue featured the 1st Special Operations Wing's history, current mission and future in MAC.



***TMF* Turns 30!**

The publication of the June 1984 issue completes 30 years of *TMF* history. Looking back, the first three decades have been exciting and full of change. We *know* the next 30 years will be equally dynamic. Look for a special report in the June 2014 issue of *TMF*.

The Mark of the Professional

Reprinted from October 1961 *TMF*

APRIL 5, 1865: The Confederate Army, after four gallant fighting years, is retreating from Richmond. The troops shuffle silently along; there is much confusion and the ranks dwindle constantly. This is a beaten army—Appomattox and surrender are only a few days away. But in the van of the struggling groups is a different sight—a compact body of men. They are tired, but they march forward doggedly; their step is firm, their chins are up, and they have their weapons. This is a fighting unit. It's "Little Billy" Mahone's famed division and if Lee says to fight, they are ready. To the end, the division remains a cohesive group, ready and able to carry out its mission.

Northerner or Southerner, you have to admire "Little Billy" and his men. They carried on them the mark of the professional. It is the same mark that distinguishes the outstanding aircrews and the best maintenance units. The equipment, the procedures and the missions may have changed, but it still takes the "pro" to get the job done right.

The MATS Flyer makes free use of the word professional. A quick scan through the August (1961) issue shows the word 11 times. If that's abuse of the word, we plead guilty with justification. In describing a MATSman, it is our highest accolade. In stating a level of proficiency, it is the ultimate goal.

What best describes a professional?

- For one thing, a professional is well trained. More important, when he earns the title "professional" he doesn't stop learning or practicing. He continues to grow mentally with his job, always seeking a better way.
- A professional is disciplined. He keeps a tight rein on his emotions and channels his energy into productive effort. His decisions are based on fact, not wishful thinking.
- A professional is steady. No flash-in-the-pan type is he. You can count on him to do his job day after day, year after year.
- A professional can be tough when the occasion demands. This doesn't mean he steps on people out of sadistic enjoyment. It does mean that he can steel himself to carry out an unpleasant task, and that he can give a firm, decisive order when it's called for.
- A professional is exceptionally competent. He can do everything expected of him and do it well.
- A professional is a man who is at his best even when the situation is at its worst. He is a "Littly Billy" Mahone with a war hopelessly lost and still fighting ready. Updated to the present, he is a C-124 pilot, 5,000 miles from home in lousy weather, and headed for a 5,000 foot strip he never saw before in his life. But he lands safely. He is also a mechanic on a cold ramp in the far north. But he forces his numb fingers to make one more check to make sure the job is done right.

MATS has professionals aplenty. They are men who earned the title by being well trained, proficient, disciplined, steady, competent, tough when necessary, and above all, they earned it a hundred times in a hundred different ways, when they delivered the goods under the most trying conditions.

These, then, are the marks of the professional. Do you fit the description?

SUPERVISION

A timely message from the past.

Reprinted from January 1960 *TMF*

by Capt. T.J. Slaybaugh
Editor, *The MATS Flyer*
(1956-1961)

MAINTENANCE

CONTROL TOWER

Just so we have a clear understanding, I'm writing as a guy who turns the wheel, pushes the rudders, listens to all the chatter on the radio, and hopes to make it to a ripe old age without violation, incident or accident. I'm the guy who is going to get pranged if something goes wrong, and I'm aiming this at the supervisor who can do the most to prevent me from getting pranged.

As a pilot, with the opportunity now and then to blast off into that blue, blue-black, or sometimes totally black sky, and escape from the pressures, congestion and hurry of drab surface existence into the even greater pressures, congestion and hurry above, let me first talk about this modern environment in which we aircrews earn our flight pay. This, I feel, is a vital prelude to a discussion on supervision—supervision at the working level.

RADAR

ALERT

WEATHER

LOADMASTER

In my book, the supervisor is a secondary individual. The number-1 helpers are the people who turn the wrenches, or tell me what the weather will be; they give me the all clear signal when it's all clear, and drive the follow-me truck; they identify my radar blip as the one that's really mine, and they keep the NOTAMS up to date; they relay inflight advisories; they load my cargo within proper CG limits, and make sure that said cargo doesn't leak; they ensure all the fuel and oil caps are secure; and on and on, *ad infinitum*.

I'm in the same category as these teammates of mine. If I do everything just right, and if everyone I deal with along the way does everything just right, then I have a routine mission. But I can't do things nearly right. For example, suppose I read all instruments correctly, but one. Let's say the one that's misread is the altimeter. All of my problems can be over—suddenly!

I self-justify some of my mistakes, particularly the ones I figure someone else will notice, by saying that I'm only human. After all, everyone has heard of human error. That's pretty well accepted—maybe not with basis in fact—but accepted nonetheless.

Honest self-analysis tells me I'm not so understanding of mistakes made by others, particularly those who help me in the pursuit of flying pay. When I'm sitting up there with a piece of broken hardware—a piece that is out of reach and for which I carry no replacement black box anyway—I'm not at all understanding of the fact that the other helpers on the team are human, too.

The very fact that I'm here to write this article is proof that my helpers and I have successfully figured things out, or lucked out, so far.

But the future scares me. The machinery I fly is getting ever faster and more complicated, and wishful thinking has failed to provide me with any marked speedup in reaction time, two more eyes, a third hand or a radio chatter degarbler. I have taken to pausing, too, just before I dismount, and giving thanks to all the unfortunates with whom I've collided in mid-air. . . thanks they have been only insects.

I have now undergone a long period of self-observation to have become convinced that I'll never become perfect. The rate of improvement over the years has been sufficiently slow to indicate strongly that on occasions, I'll goof again. I am equally certain that the rate of improvement on the part of all these team members of mine has progressed at a rate that assures future goofs on their part.

I'm worried. I feel like my position behind the gun is shifting; I'm slipping—more toward a muzzle position.

What's the answer?

Maybe it's supervision—not the way-up-the-line, broad, policy-forming type, but real, keep-me-out-of-trouble supervision down here where we peons sashay about.

I get a pretty impressive taste of this direct type of supervision a couple times a year when a flight examiner climbs aboard and, in effect, says, "Show me." I show him and afterwards he always shows me how I should have shown him. . . but I feel safer for it. Now, I understand these helpers of mine have IP's too, often called inspectors.

I say IPs and inspectors are wonderful. They're real companionable, too. You can almost always find one or more in the coffee shop . . . or willing to accept an invitation to visit same. This is good. These people should

INSTRUCTOR PILOT

TRAFFIC

PILOT

be where we can find them. And we should look them up and tell them our problems. The chaplain may be sympathetic to the hairy overspeed we encountered on takeoff, or understand why we safetied the oil tank chain with a slightly weaker piece of wire, but he can't come up with the safest possible fix as quickly as the specialist supervisor who has come up through the ranks.

But we shouldn't have to always hunt these "working level" supervisors. They ought to be out where we are crating an automatic, self-powered, hydraulic potato dicer for air shipment; where we keep the starter turning unduly long because we have somehow managed to apparently get more raw petrol running out the primer drain than the manufacturer designed the primer line to carry.

These supervisors should make it a point, too, to be around and observe some first-line operators at midnight. Thanks to Edison, and a long list of subsequent geniuses, we can crate hydraulic potato dicers and overprime engines long after the eight-to-five types have chalked up another successful eight.

My weathered Webster dictionary says an inspector is one who looks into, inspects, views, oversees. This is exactly the guy I'm talking about. He's a past master at finding lose Dzus fasteners; squinting along a flashing beam into a dark, nearly inaccessible hole where the hydraulic fluid seems to be coming from; and patiently explaining, "No, that isn't quite right. It might come loose in flight. Let me show you how to make a tie-down."

But you say these supervisors and inspectors are human, too?

Yes, and I say this is one reason we have accidents.

Proof: In another command, despite the fact that "Flaps — Set for takeoff" appeared twice on the checklist, the two pilots, the instructor pilot and the scanners all goofed. Off the far end of the runway, beyond the overrun, through the base boundary fence, and across some railroad tracks and a ditch, an eight million dollar petroleum-metal fire broke out very shortly after this one-item slip up.

Supervisors and inspectors cannot make mistakes! If they are going to succumb to this generally accepted human failing, they must do it during their off duty-time. Unrealistic? No! Take the time to be right. If you don't have enough time to do it right, you don't have time to do it at all.

Things have changed considerably since I first fumbled my way about up there in a Stearman. I have the same body—somewhat more of it and it's somewhat less agile—and I have more experience, the only factor to partially offset the tremendous change in Stearmans. Admittedly, we on the flying-direct support team shouldn't make mistakes either. But some of us do, and we have a right sizeable batch of accident reports filed away to prove that some of the rest of you do, too. This evidence seems to indicate that all of us need help. The "that's-close-enough-for-government-work" attitude has no place in accident prevention.

The answer: The men bending the throttles, turning the wrenches, and pulling phase inspections must try to do every part of their job right, and the inspectors and supervisors must see that the job is done right.

Need an incentive? I got mine on a walk in Arlington one day with a couple of next-of-kin hands, pre-adolescent size, holding tightly to mine.

The C-23A Sherpa

by Capt. Byron L. Howard
Associate Editor

"A little neglect may breed great mischief. For want of a nail, the shoe was lost; for want of a shoe, the horse was lost; for want of a horse, the rider was lost."

Benjamin Franklin
Poor Richard's Almanac
1758

Logistics! The meaning has never changed, only the means with which the actions were carried out. Without logistics, you can't run an army, a navy or an air force. It's an art to some, a science to most, and "black magic" to the uninitiated. But there's one undeniable fact—you can't win a war without an efficient logistics network, and without logistics, you can't get the nail to the horse.

Several years ago, a study of the European wartime scenario revealed that up to 300 fighter-equivalents, or between 600 and 800 sorties per day could be lost without vital spare-parts. According to the study, this lack of spares would be due to limited surface and air transportation, and to European supply imbalances. Not a comforting thought if you're tasked with helping defend Europe! To ensure this doesn't happen, logistics planners designed a new supply system. Dubbed the European Distribution System, or EDS, it's designed to provide maximum spare-parts support for *all* USAF aircraft, whether in peacetime or during a contigency, and to increase operational efficiency by reducing out-of-service ground time. There are three vital elements of this new, European-based logistics system.

First, vital time-sensitive spare parts will be stocked in dispersed warehouses to increase survivability and decrease dependence on strategic airlift from the CONUS. Second, a command, control, communications and intelligence network (C^3I), will provide assured voice and data communications for responsive management. Last, but not least, is the means to get the "nail" to the "horse," and that's the European Distribution System Airplane, or EDSA.

The concept is simple. The EDSA home base will be Zweibrucken AB, Germany. From there, standard routing will extend to RAF Kemble, U.K., and Torrejon AB, Spain. All USAFE bases will then be serviced from the warehouses at these bases.

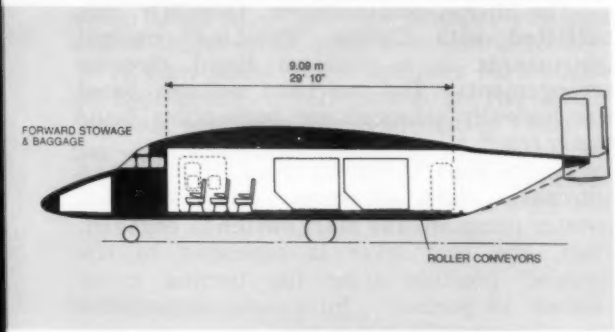
Sherpa—Rugged and Versatile

Once the system was approved, the Air Force started its search to find the best airlifter to fulfill the Request for Proposal (RFP). The RFP basically called for an off-the-shelf, turboprop aircraft that could haul bulky cargo up to the size of a J-79 or an F-100 engine, the engines used by F-4s, F-15s and F-16s, over routes as long as 700 nm. It would have to be short-field capable, as well as able to operate in the demanding European weather conditions, sometimes at altitudes under 1,000 feet AGL. The winner of this fierce, multi-aircraft competition was the Sherpa, a utility freight version of the SD-330, designed and built by Short Brothers, Ltd., Belfast, Northern Ireland. The contract calls for 18 aircraft (16 primary aircraft authorized, and 2 back-up aircraft inventory), for use solely in Europe. With the Sherpa, designated the C-23A, the Air Force is buying its first British-built aircraft since the end of World War II. (The USMC bought the British Aerospace Harrier in the mid 1970s.)

Short Brothers will not only supply the aircraft, but will also train the initial maintenance and aircrew cadre. In addition, Short Brothers technicians will do all the heavy and

depot-level maintenance on the aircraft. Short Bros. will also stock the Sherpa's maintenance spare parts, all support equipment, and tools through a contractor-operated and maintained base supply system, or COMBS. In essence, Air Force maintenance personnel will be doing mainly flight line maintenance functions on the C-23.

Form follows function in the Sherpa, and the function of the C-23 is hauling cargo. As for form, nobody has improved the basic box to stack cargo, and the interior of the Sherpa is just that—your basic box. The inside of the cargo compartment measures 6½ feet high, 6½ feet wide, and is 29 feet, 10 inches long. In all, you have over 1,260 cubic feet of unencumbered space. And speaking more of function, the intermediate floor rollers can be removed and stored for a completely slick floor. Or you can leave them installed with the standard three-rail system and haul up to four LD-3 standard air freight containers. In all, the Sherpa can carry up to 7,000 pounds of cargo. Loading cargo in the Sherpa is a



Examples of various load configurations.

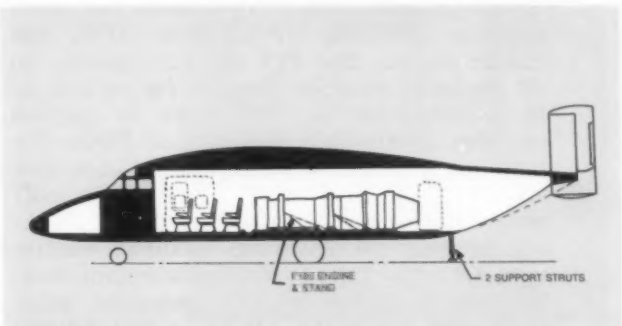
snap, too. The hydraulically-operated aft cargo ramp/door lowers to load pallets, or can be extended all the way to the ground to load small wheeled vehicles. There is also a 5½-foot by 4½-foot forward cargo door. Together, the two cargo doors permit through-loading, reducing time, labor, and aircraft ground time. An additional 45 cubic feet of cargo space for up to 500 pounds is located in the nose! But the Sherpa can haul more than just cargo. Seats can be installed either in rows, similar to it's passenger-hauling kin, or along the side walls.

In normal operation, the Sherpa will be flown by a crew of three: aircraft commander, copilot and flight mechanic. Unlike most MAC airlift aircraft which have a flight engineer and a loadmaster, the flight mechanic will be a jack-of-all-trades, combining some duties of loadmaster, flight engineer, and maintenance crew chief. Beside his normal duties of servicing the Sherpa at enroute stops, he will also be responsible for assisting in loading cargo, computing the weight and balance forms, and trouble-shooting maintenance problems.

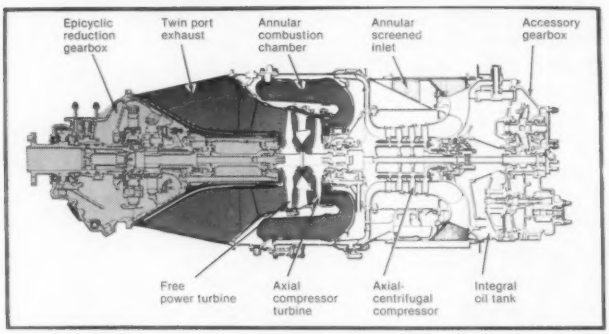
The flight deck of the C-23 is uncluttered, most of the avionics being commercially available, off-the-shelf items, except for the military radios and transponder. The Sherpa's radios will consist of a single UHF, single HF, and dual VHF-AM/FM radios. Along with two flight directors, the nav gear includes dual VOR/ILSs, single INS and TACAN, and dual ADFs. The military version of the Sherpa will be equipped with a flight data recorder, a cockpit voice recorder, IFF transponder, a ground proximity warning system (GPWS), and a radar altimeter. To make all-weather flying in Europe safer, the C-23 will also be outfitted with a Collins RNS-300 color weather radar. Besides showing the weather, the RNS-300 also has a terrain-mapping feature, and will show airways on the display.

Power to Spare

The powerplants on the Sherpa are the same as its civilian stablemate, and that's a pair of rugged, reliable Pratt & Whitney of Canada PT6A-45R turboprop engines. The basic PT6 engine has been in use for 20 years, and more than 22,000 have been built to date. The -45R on the Sherpa is fully certified for flight into icing conditions. Anti-icing is accomplished by using an inertial separator vane located in the intake duct. This system not only prevents snow and other types of



The C-23 can carry loads the size of a J-79 or F-100 engine.



The Pratt & Whitney of Canada, Ltd. PT6A-45R.

precipitation from entering the engine, it also protects the engine from foreign object damage.

The PT6A-45R consists of three axial flow compressors and a single centrifugal flow compressor. All PT6 engines use two turbine sections. One drives the compressor in the gas generator section, and the other, the free turbine, drives the propeller shaft through a reduction gearbox. In case you might have noticed that the exhaust on PT6-engined aircraft is located up near the front, you are correct. You see, the engine is mounted backwards.

Turning a five-bladed Hartzell advanced-design propeller, the PT6 will burn just about anything including JP-1, JP-4, JP-5, and Arctic diesel. The PT6 can also operate on all grades of aviation gasoline for periods up to a maximum of 150 hours in periods between overhauls. Speaking of TBOs, the time between overhauls for the -45R is now around 4,500 hours. With a reserve takeoff rating of 1,198 shaft horsepower, the PT6A-45R is rated for 1,030 shp maximum continuous use. The Hartzell/PT6 powerplant combination is fitted with a propeller autofeathering capability. It has a full reverse capability for STOL operations.

How Does It Fly?

When the Sherpa came through Scott AFB a few months ago, the author got a chance to fly it around the local IFR pattern. The first thing you notice when you walk up to the Sherpa is its size—this is no "mini" airlift airplane. The slab-sides and the three feet of ground clearance make the Sherpa seem like a much bigger plane.

I was really struck with the large interior dimensions of the cargo compartment. In fact, there was nothing in the cargo compartment that would hinder loading. There were no wing carry-through structures, hydraulic reservoirs, plumbing or control cables to get in the way of bulky cargo.

Stepping into the cockpit, you notice the relative spaciousness of the flight deck. This is no C-5, but you won't be hitting your pilot partner with your fist when you yawn, either. Looking outside to taxi also gives you the impression that you're inside a much larger airplane. In fact, you sit a little over half as high off the ground as in a Herk.

The Sherpa demonstrator, G-BKMW, was outfitted with Collins "Pro-Line" cockpit instruments in a standard flight director arrangement. The overhead systems panel was logically arranged and both pilots could easily reach all the switches.

Engine start is simple, the PT6s having an automatic start sequence. With the fuel booster pump on, the start switch is engaged. Then, the fuel lever is advanced to the "ground" position after the turbine speed exceeds 10 percent. Inter-turbine temperature (ITT) start limit is 1,000° C.

Taxi operations were straightforward on the prototype, although the tiller-type nosewheel steering was unfamiliar, seemed very sensitive, and took some getting used to. The tiller steering will remain, but steering sensitivity will be reduced in production aircraft.

With the weather at 200-feet overcast, showers and fog for the local area, we didn't have a chance to fly anything other than an IFR departure, pattern and approach. The empty Sherpa took off easily with 4° of flaps, and climbed quickly to pattern altitude. Flying the Collins flight director system was simple, and we intercepted the ILS at about eight miles out, breaking out of the weather just above decision height.

The Sherpa will not "roll your socks down"

with earth-shattering roll performance. You'll have to work a little if you're used to flying aircraft with boosted controls. Still, the overall flying characteristics are rock-solid, simple and straightforward, and should be easily mastered by MAC crewmembers. The high-aspect ratio wing and balanced manual flight controls make the Sherpa handle better than you'd expect.

But, as the author found out on landing, you really come into ground effect higher than you think with that long, thin wing. After a high flare floated us down the runway a little longer than usual, the irrefutable law of gravity brought the aircraft back to earth. After parking and engine shutdown, we took one more detailed look around the outside of the aircraft.

The high wing and high-mounted engines should serve to keep FOD a safe distance away from the twin powerplants. The 9½-foot diameter five-bladed Hartzell prop turns at a lower rpm than most other props and, along with the quiet engines, reduces the noise footprint. With the Sherpa, you can almost forget about quiet-hour restrictions.

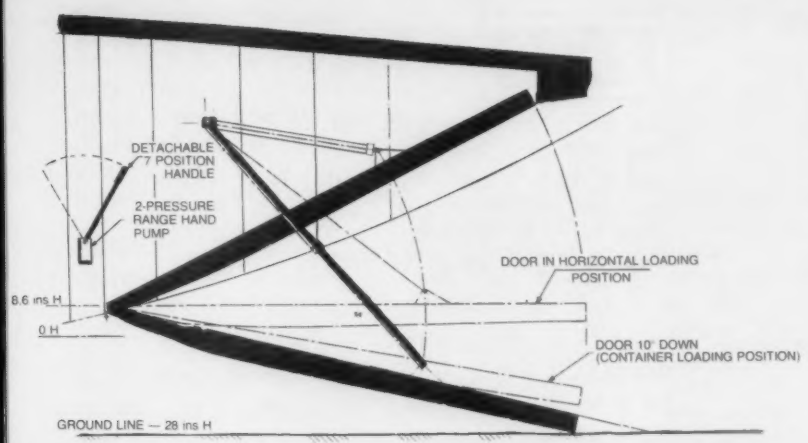
A word about Short Brothers here might be appropriate. The award of the EDSA contract to Shorts comes almost 75 years to the day since the company was awarded another contract to build airplanes from some Americans. Those Americans were the Wright Brothers, and they gave Shorts a contract to build their "Wright Flyer" in 1909!

Sherpa, EDS, and You

So, what can MAC crews expect from an assignment to the Sherpa, Zweibrucken, and the 10th Military Airlift Squadron? Well, there will be growing pains. After all, how often does MAC get to start a new squadron from scratch, with a completely new, never-in-USAF service-before airplane, doing a completely new mission? *The MAC Flyer* talked with the squadron commander for the 10 MAS, Lt. Col. Robert Spivey.

"Well, I'm thrilled to get a chance not only to command a new squadron, but to organize it as well," Colonel Spivey said, also addressing mission safety. "Keeping things in perspective, flying safely in the European environment will be demanding to say the least. I plan to emphasize safety—flying and ground; off duty and on—from day one. It'll be a challenge, but I know the men and women of the 10 MAS will do it, do it right, and do it safely!"

This will be a difficult mission, demanding the most of the maintenance personnel and aircrews. But with the emphasis on safety from the beginning, it should be a challenging, rewarding and enjoyable tour for those chosen to fly the C-23, MAC's newest airlifter. ★


DETACHABLE 7 POSITION HANDLE
2-PRESSURE RANGE HAND PUMP
DOOR IN HORIZONTAL LOADING POSITION
8.6 ins H
0 H
DOOR 10° DOWN (CONTAINER LOADING POSITION)
GROUND LINE — 28 ins H

Detail of the hydraulically operated aft ramp/door.

The aft ramp/door can be operated from either inside or outside.

Flying Hour Milestones

Lt Col Gary A. Colwell, 4 MAS
Lt Col Jerry L. Mason, 14 MAS
Maj Deon R. Gubler, 57 MAS
SMSgt Carlis E. Bruce, 185 TAS

Lt Col John F. Brooks, 8 MAS
Lt Col Lee S. Cooper, 711 SOS
Lt Col Donald L. Denomme, 711 SOS
Lt Col Otto C. Dobias, 36 TAS
Lt Col Charles E. Mays, 711 SOS
Lt Col Thomas D. Oyler, 711 SOS
Lt Col Arthur D. Seeman, 711 SOS
Lt Col Lee T. Wieland, Jr., 919 SOG
Lt Col Victor M. Williams, Jr., 11 AAS
Maj Norman H. Bowman, Jr., 711 SOS
Maj Jack H. Brown, 711 SOS
Maj Lloyd L. Buchfinck, Det 1, 2 AD
Maj Robert Lee Clark, 7 SOS
Maj Charles N. Crumpton, 711 SOS
Maj Leland J. Danielson, 14 MAS
Maj Glenn L. Ferguson, Det 1, 2 AD
Maj Samuel E. Galloway, HQ MAC/DOV
Maj James Harty, 301 MAS
Maj Paul C. Hlavaz, 143 TAG
Maj Robert S. Ivy, 185 TAS
Maj Richard B. Kerwin, 708 MAS
Maj Ronald J. Krecic, 711 SOS
Maj David T. Lee, 711 SOS
Maj Jeff Linder, 301 MAS
Maj John D. MacIntyre, 919 SOG
Maj John W. Marquette, Det 2, 1400 MAS
Maj James Storey, 1 MAS
Maj James L. Storter, 711 SOS
Maj Charles E. Sullivan, III., Det 2, 1402 MAS
Maj James M. Taylor, Det 1, 2 AD
Maj James F. Thorp, 14 MAS
Maj Charles W. Ware, Jr., 919 SOG
Maj Louis D. Wright, 7 MAS
Maj Michael S. Vest, 167 TAS
Sq Leader Keith R. C. Greaves, 50 TAS
SMSgt Calvin L. Hash, 711 SOS
MSgt Charles R. Arden, 4 MAS
MSgt Jarvis L. Buchanan, 815 WRS
MSgt John G. Easter, 4 MAS
MSgt Bruce F. Ferguson, 919 SOG
MSgt John R. Funk, 8 MAS
MSgt Donald C. Mazerat, 711 SOS
MSgt Joseph H. O'Brien, 4 MAS
MSgt Jimmy L. Richardson, 156 TAS
MSgt Craig A. Schumacher, 14 MAS
MSgt Keith E. Thomas, 4 MAS
TSgt Harold A. Harris, 8 MAS
TSgt Randall C. Kim, 14 MAS
TSgt John A. Parhomski, 4 MAS
TSgt Kenneth C. Pike, 4 MAS
TSgt Robert Wert, 14 MAS
SSgt Reagan E. Moon, 17 TAS
SSgt Lawrence L. Zilka, 4 MAS

Maj Raymond E. Hanger, Det 5, 37 ARRS
Maj William S. Kemerling, Det 1, 37 ARRS/CC
Maj William I. Latham, Jr., Det 7, 37 ARRS
Maj Joel Schrimsher, Det 15, 39 ARRW
Capt Jerry M. Brewton, Det 1, 40 ARRS
Capt Craig M. Heneveld, Det 5, 40 ARRS

(Ranks and units are those at time of award. See MACR 900-3 for details on how to apply for your own milestone award.)

ROOTS: WHERE AIRLIFT BEGAN

MILITARY TRANSPORT IS OLDER THAN YOU THINK.

by Maj. James P. Coe
Associate Editor,
The MAC Flyer (1977-1981)

Reprinted from June 1978 *TMF*

If we could trace a genealogy from the 1st Air Transport Group back in '32 through the 50th Air Transport Wing, established in 1941, and on to the Military Airlift Command, then our history would be simple—and boring. But it didn't work that way. U.S. Airlines, Air Corps Ferrying Command, Naval Air Transport Service, and Troop Carrier Command all contributed to the evolution of airlift. Our *roots*.

When Hitler ordered his Panzers to roll into Poland, the U.S. airline industry had the only fleet of highly developed and proven cargo aircraft in the country. But the aircraft industry soon turned its assembly lines toward production of aircraft for our future allies. At first, the planes were delivered by civilian pilots. But in 1941, the Army established the Air Corps Ferrying Command to deliver these aircraft. When Col. Robert Olds took over the new command on 29 May 1941, his instructions from Lt. Gen. H. H. Arnold, Air Corps Commander, were broad: Ferry aircraft from the factories to the terminals and provide other services as required. The second part of that mission was the airlift of people and supplies. Before the end of 1941, the Ferrying Command was operating regular routes across the North Atlantic, the Pacific, and through South America to Africa and the Middle East. These ever-expanding routes required the development of weather and communications facilities, and led to a close association between the organizations which supplied these services and the air transport organization—their biggest customer.

With America's entry into World War II at hand, the armed services began to expand and reorganize. The Air Service Command was created in October 1941 to handle supply, maintenance, and contract airlift for the Army Air Force. The Naval Air Transport Service started in December 1941 to cover the Navy's long-range transport needs.

WARTIME DEVELOPMENT

The attack on Pearl Harbor brought great changes in civilian and military aviation. The resources of America's airlines were placed at the immediate disposal of the armed forces through plans developed by the Air Transport Association during the 1930s. Many of the airlines' crewmembers, mechanics, and managers were inducted into the service. Many others trained Army aviators and flew the civil air routes. The airlines also gave over half of their aircraft to the armed services.

The airlift mission grew rapidly after

The C-74 Globemaster I was a giant in its day.

Pearl Harbor, and Ferrying Command was renamed Air Transport Command (ATC) on 20 June 1942. Its charter included aircraft ferrying, air transport (except troop carrier), maintenance of air routes and facilities, control of domestic contract airlift, and aeromedical evacuation. The assigned equipment to start this airlift business was pretty meager: eleven converted B-24s (C-87s), seven Boeing clippers and Martin Flying Boats bought from Pan American, and five Boeing Stratoliners (C-75s) purchased from TWA. ATC was organized into the Ferrying Division and the Air Transport Division with five wings named for geographic areas of responsibility.

Airlift followed the Allied advance throughout the war. Air supply was close behind the Armies as they won victories in North Africa and Italy. Thousands of airlift missions supported the invasion at Normandy and the offensive into the German homeland. In the Pacific, the air line-of-supply followed the island-hopping advance of American forces and fought to keep China in the war with airlift over the Himalayas. ATC's Ferrying Division delivered over 50,000 aircraft to overseas destinations and made 230,000 domestic deliveries. By the war's end, ATC and its contract carriers had airlifted 2,702,861,000 ton-miles of cargo and mail worldwide. Passenger operations reached more than 5 billion passenger-miles in 1945; air evacuation passengers numbered 86,407 in 1945 alone.

The *concept* embodied in Air Transport Command was as important as its statistical accomplishments. In 1941, General Arnold gave specific directions to his theater commanders not to interfere with ATC's operations because it was a War Department agency—strategic airlift was born.

The difference between Air Transport Command and Troop Carrier Command (TCC) was often difficult to define during World War II. Both commands were equipped with similar aircraft (C-47s and C-54s). The real distinction was in the handling of administrative, logistic, or intratheater airlift. ATC, centrally controlled, emphasized long-haul airlift; troop carrier, controlled by individual theater commanders, concentrated on short-haul missions. ATC proved its value in giant airlift tasks like the India-China operation and the return of our forces from Europe and the Pacific. TCC proved its capabilities in the airborne assaults and resupply missions that often made the difference between victory and defeat. This separation of airlift forces by mission would endure for nearly three decades.

FEMININE FLIERS

Jacqueline Cochran was assigned to the staff of Ferrying Command in 1941 to make recommendations concerning the use of women as pilots. The shortage of male pilots was a real problem and the Army turned to women for some of the domestic ferrying duty. Eventually, the women flew a wide variety of missions ranging from primary flight instruction for Flying Training Command to the ferrying of large bombers. By July 1944, the Women Air Service Pilots (WASP) in Ferrying Division had completed 12,650 ferry missions and covered over 60 million miles in the service of the United States.

THE HUMP

One historian notes, "Together with Hannibal's crossing of the Alps, the Hump operation will go down in the annals of military history as one of the most difficult logistics missions accomplished by any military force." The air supply of China kept that country in the war, not as a major combatant, but as territory denied to the

enemy and a possible jumping-off point for Allied invasion of the Japanese homeland. ATC took over the supply of China in 1942 with the establishment of the India-China Wing (ICW). The unit carried supplies over uncharted parts of the Himalayas where the mountain passes reached 14,000 feet and were guarded by peaks above 16,500 feet. This was the Hump.

Aircrews flew the Hump in C-46s and C-47s. In February 1943, the ICW delivered 2,800 tons of supplies. The addition of C-54s beefed up the lift and by July 1945, deliveries reached 71,000 tons. Carter's history of air power in World War II tells the real significance of the Hump operation: "Most important in the long run . . . the Air Transport Command's crowded airways to China were the proving ground, if not the birthplace, of strategic airlift. The India-China experience made it possible to conceive the Berlin Airlift...."

AIRBORNE!

The first airborne assault of World War II was part of Operation Torch. On 8 November 1942, 39 C-47s from the 60th Troop Carrier Group took off to deliver about 1,000 airborne troops into North Africa. Weather and enemy fighter attacks broke up the transport formations and hampered navigation; the troops were delivered far from their original drop zones. However, the airborne forces learned from their mistakes and played important roles in every major Allied advance through the war. The accomplishments of the last airborne operations of World War II are noteworthy. As part of Operation Varsity, the attack across the Rhine, the IX Troop Carrier Command used 226 C-47s and 72 C-46s to deliver, by parachute and glider, 17,000 men and their equipment into a 25-square-mile area in four hours.

NATS

Naval Air Transport Service (NATS) was the first regularly scheduled airlift operation to the fleet and provided critical airlift of supplies and personnel. By 1944, NATS' scheduled service covered over 65,000 miles of air routes. Using a balance of land and seaplanes, NATS airlifted about 41,500 tons of cargo each month during 1944. In many ways NATS was to the Navy what ATC was to the Army, but there were differences: NATS neither had a theater command like the India-China Division nor owned a big air base.

MATS

The strength and mission of ATC decreased rapidly after America demobilized following World War II. Its postwar duties were to maintain routes and bases in support of our armies of occupation, and keep the overseas airways open for military use and commercial development. In March 1946, ATC acquired the Airways and Communication Service, Air Rescue Service, Flight Service, Aeronautical Charting, and Flight Safety. Counting these technical services, ATC's total strength was 42,090 military and 17,590 civilians; this was less than one-fourth of the people assigned at the end of 1945.

When the United States Air Force was born on 18 September 1947, ATC was one of the original major air commands. The IX Troop Carrier Command was absorbed by Tactical Air Command in 1946 and became parts of the 9th and 13th Air Forces. However, a major selling point for the National Security Act of 1947 was cooperation between the armed services. The Military Air Transport Service was a major step in this direction. In January 1948, Secretary of Defense James F. Forrestal initiated the formation of an armed forces air transport service and selected Maj. Gen. Laurence S. Kuter to head the organization.

MATS acquired all of ATC's missions, services, facilities, and people. MATS also welcomed aboard 446 officers and 2,372 enlisted men in four air transport squadrons of the Unites States Navy. As an interservice command, MATS' first vice commander was Rear Admiral John P. Whitney.

The early history of Airlift reflects the advancing idea of the time: Independent air power. The first big strategic airlift missions proved it was practical to supply military forces by air. The troop carriers developed tactics for airborne operations and intratheater airlift during World War II that are the basis for today's doctrine. The concept of airlift as a strategic weapon started with Air Transport Command and culminated with the birth of the first joint service air command, Military Air Transport Service.

As An Aircraft Commander, YOU. . .

- Are now in charge of a sacred trust—the safe transporting of human lives.
- Must not let undue pressure (expressed or implied) influence your seasoned judgment during the performance of this sacred trust.
- Have at your command an aircrew—a team—in which each member must participate and contribute to the safety of the flight.
- Must delete "false pride" and "calculated risk," from your professional vocabulary.
- Will not be criticized nor stigmatized for any decision you make which will insure added safety to this flight.

Reprinted from October 1956 *TMF*

Players in a Game

There were no winners in this contest.

by Capt. James B. Zazas
39 TAS
Pope AFB, North Carolina

Hoo boy, what a route." Surveying the map before him, 1st Lt. Peter Roush, Mosey 54 copilot, was stunned. "After leaving Caliente, nobody will touch our tail," he said proudly, then added mischievously, "and the C-130 has a lot of tail to touch."

Maj. Michael Adams, the AC, sat back and smiled. "Now we have the upper hand," he thought smugly. He looked at his copilot who was feverishly studying the route. Major Adams was proud to have a copilot like Pete. He was young, aggressive and flew a good airplane, all the qualities carefully considered in his selection to attend Red Flag.

"Don't worry, Pete," Major Adams spoke softly. "I've attended three Red Flags and the game is still the same—get in, drop and get out without being tapped. With the doggy weather, Red Forces won't fly."

For TSgt. Terry Jones, situated 70 miles to the north, weather was a real concern. As video cameraman at Site 26, he was responsible for filming the "Blue Force" aircraft as they evaded the site and the SA-2 simulator.

"Drat, 2,000 feet overcast, 7 miles vis and cold," he mumbled as he set up his equipment diligently. He shivered and thought, who would fly in this mess? The desert is supposed to be warm in the fall, not rainy and 38°.

"Site 26, Blackjack."

Sergeant Jones was awakened from his daydreaming by the disembodied voice. Fumbling for the microphone to his UHF radio, he replied, "Site 26 here, go ahead Blackjack."

"Site 26, be advised the war is on. Your players are six C-130s, two F-15s and an OV-10. Red Force Air will stand down. Copy?"

"Roger. We're really going to play in this

Honorable Mention, 1983 MAC Flying Safety Writing Contest

mess?" Site 26 asked incredulously.

"Looks that way, Terry. Any update on the weather?"

"Negative. No change."

"Roger. We'll keep the coffee warm. Blackjack out."

Sergeant Jones put the mike down and turned towards the desert. "I've seen you take six lives," he said as if carrying on a conversation with the vast expanse before him. His eyes narrowed, "Lift the clouds and clear the skies. Those aircrews have enough to worry about without your tricks."

Maj. Roger Perry eased back in his padded chair and downed another swallow of coffee. As a threat controller at the range complex building, his job was to direct the various aggressor threats against the "good guys" who passed through his sector.

"Amazing," he marveled to himself. "The state of the art is such that I can watch a war develop and be won or lost on a half million acre range 70 miles away, all in climate controlled comfort. I love it!"

Beside Major Perry sat four television-sized screens, each manned by a controller responsible for his type of threat and covering a specific area of the range. Before him rested a 5 x 7 foot color screen on which the whole war could be seen without any risks.

So what's a little weather, Major Perry thought. He turned to the threat controller working Site 26 and said, "Those MAC jocks are a tough breed. They can hack it. I almost wish I could fly with them. With Red Air down, it should be a piece of cake. Right, airman?"

"Yes, sir," the nameless controller dutifully replied.

"Colonel, I can't believe we're going to fly today. Red Air is down, we can't go below the clouds..."

Lt. Col. Mitch Bass, leader of Hazar flight, could tell his wingman, Capt. James Doyle, was upset.

"Easy, Jimmy. I know how you feel." Colonel Bass responded reassuringly in a long drawl. "I know everything is duck soup, but the C-130s want to play, so we'll play. Besides, the opportunity is there to see how well all that fancy gear really works." With 900 hours under his belt in an F-15, Colonel Bass knew the equipment was phenomenal.

Major Adams and crew surveyed the silent scene before them. Only the whine of the Allison turboprops broke the stillness in their headsets. Three hundred feet below lay a desert wet with rain; peakless mountains obscured by featureless, gray clouds. Two thousand feet above them were the same clouds.

The navigator tried to add some color. "Anybody who finds Mount Irish in this mess gets a free dinner on me!"

Lieutenant Roush turned towards him as if to accept the challenge, but suddenly halted, midway. One hand reached for his headset, the other for the intercom switch.

"Copilot to crew, Mosey 57 is aborting at Student Gap...something about the weather. Looks like we're on our own to Poker DZ."

"How are we supposed to fight a war if all the players quit, especially our wingman?" Major Adams was frustrated, yet determined to get the drop off. Spotting the prized mountain ahead, he added confidently, "Make mine fried chicken and rice. There's your mountain. Uh, by the way, 'bout time for a warning?"

"Roger. Crew, nav, 20 minute warning."

Major Perry settled into his easy chair with a fresh cup of coffee. Before him, the miracle electronic board plotted the F-15s and aborted C-130 holding south of Student Gap. "Where's the OV-10?" he asked one of the controllers impatiently.

"Just now entering Pahute Mesa," came the reply.

Major Perry nodded his acknowledgement. Even with half the players down, he knew this game was still the best around. In 20 minutes or so, the miracle board would show who was dropping where and who was evading what threat. A new champion would be crowned, Red Force or Blue Force. Only the expertise of the aircrews would determine who would smile at debriefing. All he could do now was wait for the green blips to appear identifying Mosey Flight's drop.

The OV-10 snaked its way through the desert. Originally, the crew was supposed to direct a pair of F-4s in for some live bombing. However, due to last minute weather cancellations, the Warlord at Nellis decided to allow the OV-10 to serve as a neutral player, a weather ship. Before the scheduled time-over-target, the nimble turboprop flew the various escape routes and reported its findings—clear in Cedar Pass and

the valleys, but overcast over the flats as well as in the higher elevations.

At Site 26, Sergeant Jones heard the OV-10's report. He hoped it was true. Cedar Pass was always used by crews as an escape route from the northern drop zones. The pass offered good protection from the threats, whether man-made or natural. Today's threat was more natural, but he would make sure the C-130s had a good, man-made threat as well.

He turned towards the desert and chuckled. "What a phenomenal, electronic, technological marvel we have created. Man possesses the judgement, yet nature can still call the shots."

Behind Sergeant Jones, nature called one more play. Winds shifted and 10,000 tons of water vapor came down from the mountains above. Clouds formed in the valleys.

Mosey 54 continued onward towards the DZ. Skillfully, Major Adams guided the C-130 through the canyons and around the jagged mountain sides. Scattered to broken clouds were starting to appear within an arm's reach. The solid gray stuff was still 2,000 feet above them. Having participated in Red Flag three times, Major Adams knew this desert better than the back of his hand.

"Uh, pilot, let's call it quits," Lieutenant Roush pleaded. "This stuff is starting to get thick."

"Nonsense, copilot. One more ridge to crest and it's bundles away. Besides, the escape route is perfect....through the pass and onto the flats. We can stay below these clouds all the way out. The OV-10 reported the valleys clear, didn't they?"

"Yes, sir. But what about the mountains around the DZ and...?"

Configured for the drop, Major Adams pushed Mosey 54 over the last ridge.

"The DZ should be...OH, LORD...it's socked in..."

Major Perry tensed. This was it! The miracle screen showed Mosey flight for a brief moment. Then their green, numerical identifiers disappeared as the aircraft evaded radar coverage, except for Mosey 54 which lingered for a few seconds longer. It was by itself at Poker DZ 10 miles away from the other C-130s, but why was it so high?

Hazar Flight, 15,000 feet above the arena, watched the airdrop unfold. Their super-sophisticated, look-down equipment showed five planes rise, level and descend. But now, only four were still being painted.

"Hazar Lead, wing has broke lock on Poker Mosey."

"Roger," came the familiar drawl. "Where did he go?"

Major Adams hauled back on the yoke and banked sharply. In an instant, Mosey 54 was in the clouds. His mind race, "Where are the mountains? Where are the mountains?"

Lieutenant Roush felt the aircraft shudder as the wings lost their grip with lift. At 1,923 feet above the desert floor, Mosey 54 quit flying.

Sergeant Jones was still facing the desert when he heard a sound similar to distant thunder. He felt a tremor pass through his feet. Tears were already forming in his eyes when he turned to face the mountains. Slowly, deliberately, he reached for the microphone to tell Blackjack to "knock it off." The game was over. Everybody had lost. ★

ABOUT THE AUTHOR

Capt. James Zazas is a 1977 graduate of DePauw University where he was commissioned through AFROTC. After completing UPT at Columbus AFB, he was assigned to Pope AFB and is now a C-130 aircraft commander.

In The Beginning, There Was. . .

Editor's Note: We've reprinted the very first episode of C.R. Terror so that you all might know the origin of MAC's Most Senior Major. C.R. was created in 1954 during "twofers" night at the Andrews AFB Officers Club, the brainstorm of one Captain William C. Anderson. Anderson wrote most of the early C.R. tales, but since the late 1950s, the antics of the Ace Aviator have come primarily from the fertile minds of the trusty *TMF* editors.

But C.R. is more than a one-dimensional comic-strip character. His many close brushes with disaster have served to bring critical safety issues out in the open. Although his exploits often press the limits of believability, there's always a safety message somewhere in each month's tale.

Occasionally, though, the Magnificent Major surprises everyone (the editors included) and does everything right. After all, it's not that C.R. is totally incompetent. Rather, he's always too busy to really study the manuals or keep up on his currency.

Finally, a caution on C.R.'s character in this first tale of his flying exploits. He's always imagined himself as a ladies' man, and 30 years ago he probably qualified as an MCP (male chauvinist pig). But all of our female readers should relax! C.R.'s faithful female companion, Tassels Taylor, is a liberated lady of the 1980s and will ensure that C.R. toes the line regarding EOT.

C.R. Terror

***Captain* C.R. Terror makes his magazine debut.**

Reprinted from June-July 1954 *TMF*

C.R. Terror is really a fine officer. Used to be a pretty hot pilot, too. Kept up with the latest Air Force regs and knew his flying job inside out.

He's had a desk job for the past few years, though. Doesn't do much flying anymore—just on weekends to maintain his rating. Finds it hard to devote the attention he should to the Combat Readiness Training program. No time for it! Got too much on his mind such as reports, requests, inspections and paperwork. Doesn't have much time to think about airplanes.

So let's look in on C.R. as he prepares for a weekend flight.

"Anything new in this?" he asked the airman behind the operations desk, as he glanced at the file of Eagle AFB NOTAMS. "Guess not," said C.R. as he shrugged his shoulders, "probably just the same old stuff."

"Depends on what you mean by 'old,' sir," suggested the airman.

"Nothing that could concern me much," C.R. said as he looked over his shoulder at an attractive young weather forecaster.

"You know about the repairs being made on the runway and...," the airman tried again, but C.R. was concentrating on the new girl.

"A blonde at that," mused C.R. turning again to the desk.

"Pardon, sir?"

"Nothing, boy, nothing."

C.R. filed the local plan for his 4-hour flight. Got the AO's signature. Winked at the blonde as he left operations for the flight line.

Unlike most pilots who flew from Eagle AFB, C.R. Terror was not troubled by the two runways which intersected at their beginnings. He aligned his plane, opened the throttle and gunned his C-45 down the wrong strip, scattering the runway repair detail at the far end.

The tower informed him that this was not exactly what the base commander had in mind when he ordered the runway closed. "Hmmmph!" he grumbled to himself, "why don't they tell a man these things before he gets on the line? Wasn't like this in the old Air Force. No, sir!"

Cruising at 5,000 feet, C.R. thought about the prospects of the Cardinals this season, the reports he'd have to sign back at the office, his golf score, and occasionally, about the plane he was flying, and how to fly it. And he couldn't get the blonde out of his mind.

He looked over at his watch; almost 1800.

It would be dark before touch-down. "Nothing to night landings, though. Anybody can make 'em. Wonder why these training people raise such a fuss over 'em. Guess the green kids they've got flying now don't know their stuff."

Perfect flying conditions, a well-maintained craft, the deft hand of C.R. Terror, *almost* 4 hours of uneventful flying passed, and he was ready to land. He picked up the Eagle beam and prepared to simulate a range approach. The timing wasn't bad either as the weather was turning hazy.

The beam grew louder, and C.R.'s thoughts turned again to weather forecasting. "Didn't know they had any girl forecasters assigned!" The beam reached its maximum pitch, faded out for a few seconds, built up fast, and then again began to fade as C.R.'s thoughts wandered.

"Yeah, and a blonde at that!" Maybe she'd still be around 'ops' when he got in. Might be interesting.

"Well, better let the tower people know I'm around.

"Estimating Eagle Range Station in three minutes!" he reported as his '45 droned away from Eagle AFB at 120 m.p.h.

"Hrrumph! In the old days they didn't make beams so weak that a man could hardly hear 'em," C.R. complained, as he rolled the volume up a turn.

"Hey, hold on! What's this—I couldn't have gone past! Well, these old radio receivers have about had it anyway. Hope this automatic radio compass works." He flicked the switch from antenna to auto and made the 180° turn back to Eagle. Completing his base leg over Eagle at 500 feet, Terror wondered casually what the new pattern altitude was, then dismissed the thought.

These new procedures were O.K. for the kids, but common sense was enough for an old professional like C.R. Terror. After all, anybody could make a night landing. Nothing to it. Gear down—checks in the green. Props forwa.d, mainfold 12.

The altimeter read 300 feet. Field lights came closer.

"Better get this crate down fast—that blonde might still be there. Might as well touch 'er down at the first set of lights. Funny! Didn't notice any approach lights. Only a couple of feet more. Now for a nice smooth land—CRRRRRRRUNCH!"

Scratch one wooden fence for C.R. Terror!

The '45 bounced frivolously across a state highway, smashed through another fence, and jolted over 50 feet of lumpy field. The plane halted abruptly, dipping its nose into a creek. Stumbling from the plane, C.R. muttered, "Windshield refraction. Those bums. I turned in a U.R. (1954 equivalent of an HR) on it over a week ago."

The crash truck arrived and C.R. rode back to operations.

"Lousy breaks, lieutenant, that's all, just lousy breaks," explained C.R. to the young Air Force duty officer.

"Brakes, sir? On the plane?"

"No, the blonde; she's gone."

"The blonde?"

"Yeah, the forecaster."

"Oh, well, you did make a poor approach, you know."

"To the blonde?"

"No, to the runway."

C.R. signed an accident statement, handed it to the AO and went to the locker room to change clothes. Two pilots who had just brought in a C-124 were discussing minor engine trouble encountered on their flight. C.R. Terror listened briefly, then offered:

"Trouble? With a C-124? Hah, a new airplane. You couldn't have much trouble with those, boy. Anybody can fly a new airplane!"

Incidentally, before C.R. left the locker room he received a note from his CO ordering him to report PDQ.

Quick Stoppers

Generation Gap

The following essay, now a classic, was written by an 11-year-old schoolboy after an Air Force pilot visited the boy's classroom and gave a talk about Air Force careers and flying.

Why I Want to be a Pilot—

When I grow up I want to be a pilot because it's a fun job and easy to do.

That's why there are so many pilots flying around these days. Pilots don't need much school; they just have to learn to read numbers so they can read instruments. I guess they should be able to read road maps too, so that they can find their way home if they get lost.

Pilots should be brave so they won't get scared if it's foggy and they can't see, or if a wing or motor falls off, they should stay calm so they'll know what to do.

Pilots have to have good eyes to see through clouds and they can't be afraid of lightning or thunder because they are much closer to them than we are.

The money pilots make is another thing I like. They make more money than they know what to do with. This is because most people think that flying is dangerous, except pilots don't because they know how easy it is.

I hope I don't get airsick because I get carsick, and if I get airsick, I couldn't be a pilot and then I would have to go to work.

(from Sept 1971 *TMF*)

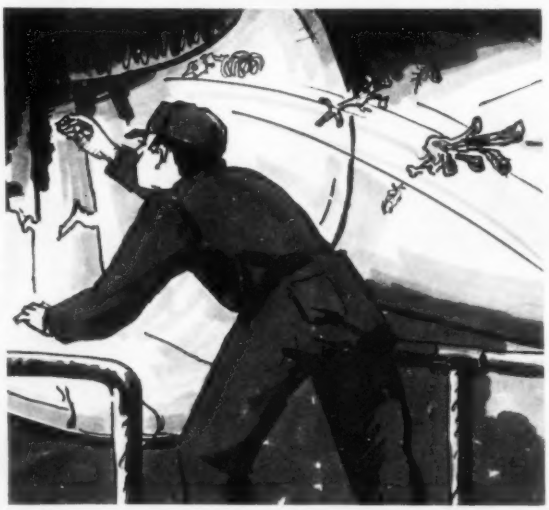
Engines-Running FOD Check

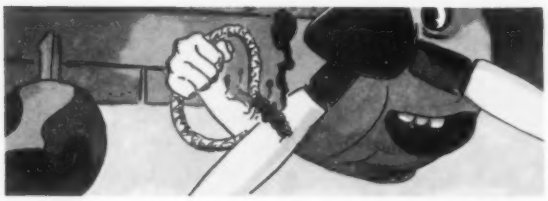
The following is how *not* to inspect a flying machine for damage following a suspected bird strike.

The large four-engine MAC airplane encountered a flock of birds on short final during an aircrew proficiency sortie. Although the crew tried to miss the flock, they were unsuccessful and thought they heard the sound of an impact. The aircrew full-stopped the struck airlifter and maintainance came out for a look-see.

Once in parking, the maintainers gave the airlifter a thorough once-over, *while the engines were still running*. All engine indications were normal, and the wrench benders couldn't find anything wrong with our four-engine friend, so the crew took off to finish the mission.

For the rest of the sortie, about three hours worth, the engine indications were all normal. When the crew finally terminated the mission and shut down the engines, maintenance personnel found a "little" engine damage. How much? In all, they found two cracked compressor blades and a broken compressor vane on the number three engine caused by a bird which had been ingested into the engine. Total cost was about $56,000.





Three Down, One to Go!

Somewhere over Europe, we find the E-type Herk is purring away and all is well. Well, that is, until the number three generator-out light comes on. There's no indication of freqs or volts, so the engineer tries a reset. The generator stays dead. The crew summarily shuts down the number three engine IAW the Dash-One, and heads for the nearest base with good support, which, by the way, is about the length of Italy away.

About ten minutes later, the number four generator-out light comes on. After a quick check to ensure a simulator instructor hasn't sneaked aboard, the engineer goes through the same drill as before with the same results. Enough's enough, decides the AC, and he immediately heads for a much nearer diversion base. He also decides, wisely, to leave the number four engine running, because the weather is not particularly sterling at the diversion base in question.

Now on short final to an adequate runway, and having just broken out of the soup, the number one generator-out light comes on. Still no simulator instructor to blame, and still no freqs, volts or successful reset. Our stalwart Herky crew touches down sans the number three engine, and with only number two generator and the ATM generator putting forth any juice.

The electricians could never determine what went wrong with the number four generator. But the number one generator-control relay was burned out, and all the windings in the number three generator were shorted out and grounded together. All in all, the crew was thankful to be near a suitable field, and not out over the cold, cold waters of the North Atlantic!

Deuteronomic Declamation

Recently, officials at London Airport had to refer to the Bible to decode a reply from a Royal Air Force pilot inbound from Gander. He had just been ordered to divert his VC-10 airliner to Keflavik to pick up some equipment. The pilot answered the order with this message: "Deuteronomy, Chapter 27, Verse 18."

Officials checked and found that the verse read: "Cursed be he that maketh the blind to wander out of the way. And all the people shall say, Amen."

Have any of you had the same thoughts immediately following a diversion?

(from Sept 1971 *TMF*)

Joys of Being an Editor

Getting out this magazine is no picnic.
If we print jokes, people will say we are silly;
    If we don't, they say we are too serious.
If we clip things from other magazines,
    We are too lazy to write ourselves;
    If we don't, we are stuck on our own stuff!
If we stick close to the job all day,
    We ought to be out hunting up articles.
If we do go out and try to hustle,
    We ought to be on the job in the office.
If we don't print contributions,
    We don't appreciate true genius;
    If we do, the magazine is filled with junk.
If we make a change in someone's article,
    We are too critical,
    And if we don't, we are asleep.
Now, like as not, someone will say we swiped this
    From another magazine.
WE DID!

(from April 1972 *TMF*)

HANDS

They're not pretty, but they prevented an accident.

Reprinted from May 1967 *TMF*

These hands just prevented a spectacular aircraft accident. They did it by performing an operation. Need for the operation was discovered when an access panel was opened and a dark spot noted on a hydraulic line. A quick swipe and the fingers of the right hand were stained a light pink—hydraulic fluid.

A few minutes later, the hands were back. The safety wire was cut and removed, then the line unfastened with wrenches. When the section with the damp spot was out, a finger probed the flange and found the slit where the line had cracked. The left hand picked up a replacement line and the index finger of the right slid down a tech order page to stop under a part number; final verification that the stocklisted item was the correct one.

The hands fastened the new line in place and threaded and twisted the new safety wire. Finally, one held a pair of pliers and the other caught the wire ends snipped off by the pliers.

A few minutes later, a different pair of hands reached through the access panel. One guided a flashlight's beam as the operation was inspected. The other tested the tension in the safety wire. Finally, the fingers felt along the aircraft's skin beneath the line to verify no scraps or pieces had been left.

Later, both pairs of hands showed up better in the fluorescent light of the flightline snack bar. They weren't the hands you'd normally think of as performing skilled operations. These were red and rough-skinned from repeated exposure to weather and harsh fluids. Scabbed knuckles and red scratch streaks illustrated the hazards in the metal bowels of an aircraft. But because of these hands with the rough, blemished skin and black fingernails, and because of the operation they had just performed, an aircraft is *not* going to crash.

After Deadlines

C-130 TRAINING VIDEOTAPES AVAILABLE—Little Rock's 34th Tactical Airlift Training Group has, in cooperation with the Aerospace Audiovisual Service (AAVS), produced some outstanding C-130 videotape programs. The videotapes, while not ranking up there with *Firefox* for special effects, are certainly good enough to keep you from getting into trouble, and are available to your through you AAVS service center. Here's just a partial list of what's available:

"Engines Running On/Off Load" (600469)
"C-130 Gear Tie-Down" (600470)
"C-130 Buddy Start" (601917)—Best AAVS Training Video, 1983
"Palletized Cargo Loading Tac Loader" (601916)
"C-130 Hoover Winch Operation" (602872)
"C-130 Stalls" (600098)—Best AAVS Training Video, 1982
"C-130 Structural Limitations" (602383)

Other productions from the "Herky Hollywood" are upcoming and will be announced in the near future. If you have any questions, call Maj. Larry Taylor, AV 371-3141.

MOST II MOSTEST FOR MOTORCYCLISTS—Starting 18 June, the Motorcycle Operator Skill Test will become required for all MAC motorcycle operators. If you ride a powered, two-wheel machine on a MAC base, check with your local traffic safety instructors to see when the MOST II will be given. Prove to yourself and to others that you have what it takes to operate a motorcycle, safely!

MORE ON "AIRBORNE WEATHER RADAR"—*TMF* reader Capt. David Ladwig, commander of Det 4, 177th Weather Squadron at Altus AFB, writes to say that our article on the use of airborne weather radar was excellent. But, reader Ladwig points out, and rightly so, by using Air Force ground-based weather radar (or those of ARTCC), and the pilot-to-metro service (PMSV), the aircrew has yet another useful tool in avoiding lines of severe thunderstorms. "Combined NWS/AWS coverage is virtually CONUS-wide," he writes, "and available at many overseas areas." Its up to you, but we at *TMF* echo Captain Ladwig's comments—"The forecasters are waiting for the call."

***TMF* INSTRUMENT QUIZ ERRATA**—Far be it for us to claim a perfect issue, so we hereby humbly admit we omitted a word from our March issue's "Instrument Quiz." It wouldn't be so bad, but that one little word changed the whole meaning of the answer. To wit, the answer for question 6, located on page 12, should read, "You could hold *at* a higher airspeed if your aircraft requires it." The now only *semi*-sharp eyed editors left out the "at" which, as you can tell, could lead to a false impression.

OUTSTANDING MAC AIRLIFT UNITS NAMED—The 41st Tactical Airlift Squadron and the 8th Military Airlift Squadron have been named MAC's Outstanding Tactical and Strategic Airlift Squadrons, respectively, for 1983. The 41 TAS played active roles in "Urgent Fury," "Brim Frost," "Green Flag," "Maple Flag," and "Bright Star," as well as safely completing their European rotation in support of NATO to earn the distinction. The 8 MAS, along with their normal world-wide flying missions in support of NATO and PACAF, flew the record-breaking mid-winter Antarctic airdrop mission, and actively participated in the Grenada rescue mission to earn the right to be called "the best." *TMF* salutes the men and women of these fine airlift squadrons.

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